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ABSTRACT

Past and current practices as well as anticipated changes in administrative patterns in the health sciences are reviewed in the general context of the changing patterns of administration in higher education. The changes discussed include those in financial support, priorities, controls, and expectations. Several specific questions are addressed: (1) Should a health sciences center remain a part of the university or should it separate and become an independent mini-university? (2) What should be the role of the chief administrative officer of the health sciences center? (3) What could be done better to integrate the health sciences schools and their programs? (4) Should the basic sciences departments in the health sciences be constituted as a separate college in the health sciences center? (5) Should universities and their health sciences centers continue to own and manage hospitals, and, if so, should university hospitals and their directors be under the management and control of the dean of the medical school or the vice-president for health affairs? (6) To what extent should health sciences center operations and facilities and their staff be governed by outside governmental planning and regulatory agencies? (LBH)

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The Administration of Education for the Health Professions: A Time for Reappraisal

by
John R. Hogness

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HE 008 512

Third David D. Henry Lecture
University of Illinois Medical Center Campus
Chicago, Illinois

The David D. Henry Lectureships in Educational Administration are endowed by gifts to the University of Illinois Foundation in recognition of Dr. Henry's contributions to the administration of higher education, including his career as president of the University of Illinois from 1955 until 1971. The lectures are intended to focus upon the study of the organization, structure, or administration of higher education, as well as its practice. Selection of persons to present the lectures is the responsibility of the chancellors of the three campuses of the University. Presentation of the lectures is alternated among the campuses on an annual basis.

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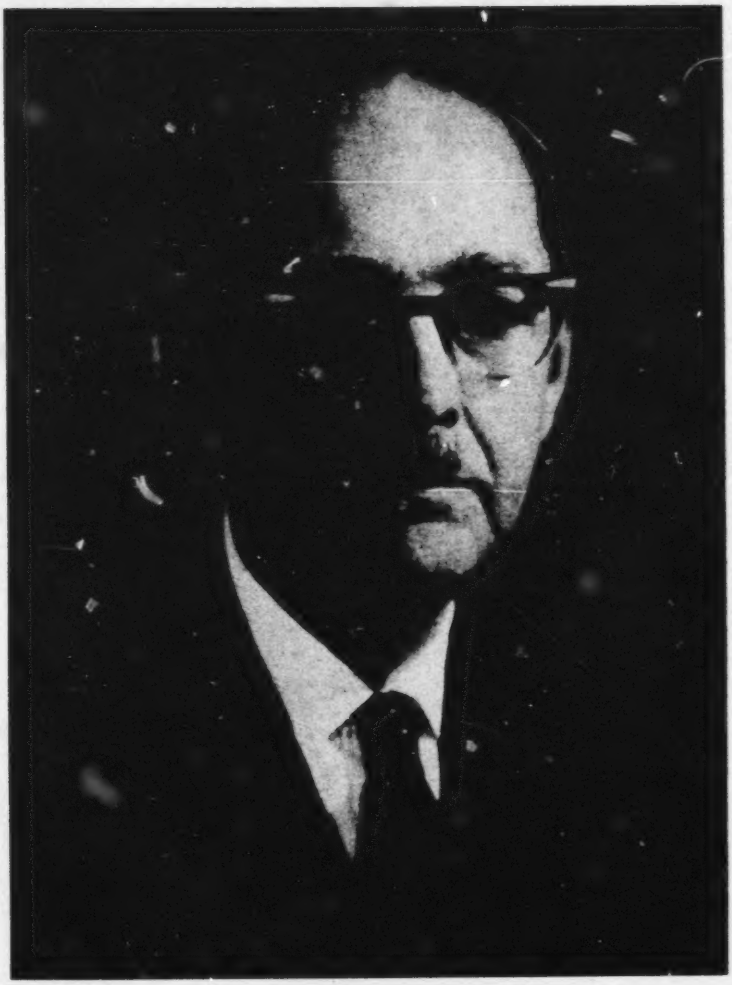

David Dodds Henry

President, University of Illinois
1955-71

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Preface

The David Dodds Henry Lectureship at the University of Illinois was established by friends of the University to honor a man and to further the profession to which that man still dedicates his life. Following the announcement of the establishment of the lectureship, President and Distinguished Professor of Higher Education Emeritus Henry commented that he hoped the lectures and publications made possible by the program would mark the University of Illinois as a center of learning in the field of educational administration which would serve both the University and the profession.

We at the University of Illinois are pleased that the esteem in which our colleague, David Henry, is held has made it possible for his hopes for the lectures to be fulfilled. In an era when it is said by some that no "giants" exist in the profession, the Henry lectures have brought together individuals who belie that statement. It is my bias that today's world brings renewed significance to the profession of educational administration, to its theory, and to its practice. This volume extends a series which has made and continues to make sound contributions to that profession, and we present it with pride and enthusiasm.

John E. Corbally
President
University of Illinois

Introduction

The faculty, the students, and the administrative officers of the University of Illinois at the Medical Center, Chicago, were both pleased and honored when Dr. John R. Hogness, President of the University of Washington, agreed to join us today and to deliver the Third David D. Henry Lecture.

President Hogness fulfills completely the expectation that those who are chosen as Henry Lecturers be persons of national stature, have a scholarly approach to administration in higher education as a discipline, and be noted for the articulation of their philosophical ideas.

When the Medical Center campus was selected to host the Third David D. Henry Lecture, the planning group quickly concluded that an invitation should go to President Hogness. His background and experience, as medical director of a university hospital, as a medical school dean, as director of a health sciences center, as executive vice-president of a university, as the first president of the Institute of Medicine of the National Academy of Sciences, and as a university president, not only qualify him to speak on the administration of higher education but permit him to do so with an emphasis on the special problems of administration in a complex academic health center and with firsthand knowledge of the relationship of the health sciences and professions to higher education at large. Thus, we are confident that the published lecture will add a significant dimension to the literature of administration in higher education.

Joseph S. Begando
Chancellor
University of Illinois
at the Medical Center

The Administration of Education for the Health Professions: A Time for Reappraisal

by John R. Hogness, M.D.
President, University of Washington

Thank you, President Corbally, Chancellor Begando, Dr. Miller, and members of the Board of Trustees.

May I say at the outset what a great privilege and honor it is to be invited to present the Third David D. Henry Lecture at the University of Illinois. I am delighted to be here with you, and it is my hope that my remarks will stimulate a great deal of discussion this afternoon and tomorrow morning.

In this lecture I will discuss the major issues before us today in the areas of organization and administration of education for the health professions, and review some of the questions we must ask ourselves as we move ahead into the late 1970s and the '80s.

I should like first, however, to pay a brief tribute to the educator for whom these lectures are named: Dr. David Dodds Henry, a man who has devoted most of a lifetime to the profession of educational administration.

David Henry's singular career in higher education spans more than half a century, forty years of which were spent in administration. There are few in the history of higher education in this country who have served the administrative area of his profession so long, so faithfully, and so meritoriously. With quiet but persistent courage over the years he steadily assumed leadership in the development of administration of higher education, until today he stands as a symbol of distinction in this field.

David Henry has served as the national leader of the Association of Urban Universities, the Land-Grant Association, the American Association of Universities, the American Council on Education, and the

Carnegie Foundation for the Advancement of Teaching. From 1955 to 1971 he led the University of Illinois through a period of phenomenal expansion and transition from a centralized entity to a decentralized system that has become a model for multicampus institutions everywhere. I should particularly like to note, in relation to my own topic of "Administration of Education for the Health Professions," the establishment at Illinois, during David Henry's term as president, of experimental new clinical medical schools and the attendant development of innovative health care training — achievements that have contributed invaluably to emerging nationwide patterns of education in the health sciences.

Since his retirement as president of the University of Illinois, David Henry has continued his scholarly contributions by serving as Distinguished Professor of Higher Education at his home institution and as chairman of the National Board on Graduate Education of the National Academy of Sciences. David Henry's achievements during these last fifty years of rapid change, almost upheaval, in the administration of higher education have been an inspiration to us all, and I am indeed proud to present this lecture in tribute to this outstanding educator.

General patterns provide background

Before going on to the discussion of past, current, and anticipated changes in administrative patterns in the health sciences areas of our universities, I would like briefly to review the changing patterns of administration in higher education in general. These changes — in financial support, in priorities, in controls, even in expectations for higher education in the future — serve as a frame for fitting into proper perspective the changes taking place in the health sciences.

David Henry himself, in his recent book, *Challenges Past, Challenges Present,* reminds us that:

> The chronicle of higher education in the decade 1958-1968 was one of unprecedented enrollment growth, expansion of programs, and increase in functions. Institutions were responsive to the social demand for new services, increased research productivity, and improved educational opportunity. The financial requirements for this response were supported by the high level of public confidence. The public regarded higher education as essential to economic growth, national defense, social gain, and equality of opportunity in employment and in fulfilling individual cultural aspirations.
>
> . . .
>
> About 1968, it became apparent that the cost trend induced by the growth period exceeded income prospects.[1]

It became obvious that higher education was in financial depression. Severe budgetary limitations are fact, rather than possibility, on most campuses throughout the nation today.

As Henry points out:

> The downturn not only came suddenly, but because it emanated from all sources simultaneously and sharply there was little opportunity for gradual adjustment. In some states, the curtailment moved quickly from cuts in requests to cuts in expenditures when computed in constant dollars. The result in many instances was harsher treatment for higher education than for most of the economy and other areas of public service. Further, the cutback was more damaging to senior baccalaureate and graduate institutions than to community colleges and student aid. Obviously, the priority for higher education had changed.[2]

This lack of adequate financial support and the associated diminution of public confidence in our institutions of higher education has been accompanied by the imposition of an increasing number of external controls by various federal and state regulatory agencies and by a number of changes in internal priorities. These factors have resulted in a shift in the decision-making authority away from the central administration of the university and toward increasing participation by the various constituent faculties and other bodies in the university. This has resulted, in turn, in what James A. Perkins, a member of the Carnegie Commission on Higher Education and chairman of the board of the International Council for Educational Development, has referred to as the "predicament" of university organization.

Perkins believes this predicament:

> . . . has arisen in part because of its [the university's] conflicting missions. Further, the university is asked not only to perform conflicting missions but also to perform them within the framework of an organizational design appropriate to its earliest mission — that of teaching or the transmission of knowledge. The newer functions of research, public service and, most recently, the achievement of an ideal democratic community within the university have organizational requirements that are significantly different from those necessary for teaching.[3]

As a result of the various changes that have occurred within the university, Perkins believes that the university's missions will change in the future so that:

1. Instruction will remain the central mission but student choice will increasingly outweigh faculty prescription.
2. Large-scale research gradually will shift to nonuniversity institutions.

3. The residential campus will give way to off-campus living systems. Nonresidential institutions such as community colleges will have a comparative cost advantage which will become increasingly attractive.
4. Service to the public will decline dramatically in some areas, such as defense and space; continue with minor modifications in agriculture, medicine, and engineering; and may substantially increase in urban affairs, ecology, race relations, and international organizations, both public and private.
5. The democratic impulse will dominate systems of governance leading to representation, election, and consensus rather than appointment and decision making by highest independent legal authority.
6. The locus of power to plan and allocate resources will continue to gravitate toward the managers of systems and from private to quasi-public and public coordinating bodies.[4]

Whether all the changes envisioned by Perkins will come about is debatable. But it is clear that many of them are occurring. As these university changes do take place, it also is clear that they will be reflected in the administration and organization of various programs in the health sciences as well.

However, the degree to which these changes occur in the health sciences may be different from that in the remainder of the university. For example, I think it is quite obvious that the movement toward democratization is well established in most universities and will continue for some years. I suspect that the health sciences will lag behind the rest of the university in this regard, but it is inevitable that democratization with increasing involvement of faculty and students in the governance of the health sciences finally will occur. This undoubtedly will have major effects on administrative patterns, not only in the various schools and colleges in the health sciences but also in other administrative units including hospitals.

Although the bulk of my remaining remarks will not deal directly with the issues that have been raised so far, I feel it is important to bear these in mind as background for subsequent discussions.

Present, future predicated on history

In my discussion of the organization and administration of educational programs for the health professions, I will limit myself almost entirely to university-based educational programs, and I would like to point out at the outset that while it is my intent to emphasize the educational aspects of these programs in the area of the health sciences particularly, it is impossible to separate them from other aspects, notably research and public service.

I would like first to discuss briefly some of the historical developments in the organizational patterns of the health sciences schools and colleges, and then turn to a view of the present status of the administration of university-based health sciences programs and some of our current problems. Finally, I will pose some questions which I feel must be answered if we are to undertake a meaningful reassessment of our current programs, and if we are to begin to make judgments that will affect the organization and administration of educational programs in the future.

I intend to be somewhat provocative, and I will offer my own answers to many of the questions I pose, but not to all. In reviewing some of the historical aspects of the organization and administration of health sciences, I will concentrate rather heavily on the administration of programs for medical education, except for the discussion of relatively recent events, since medicine was, until recently, so much a predominant discipline in patterns of administration that administrative patterns in the other health sciences schools tended to follow, more or less, the patterns of medicine.

The school of medicine in the days of Hippocrates consisted of Hippocrates, the students who gathered around him to learn, and the patients he treated. There was no need for a complex administrative structure. I doubt that Hippocrates even had a business manager, much less an office of public information. And so it was with Maimonides and the great clinician philosophers of the older Mediterranean cultures.

But with the development of early medical techniques, learning at the knee of the master became inadequate, and the need for a more formal curriculum for medical education emerged. A stylized curriculum, in turn, required a coordinating, organizational structure. Eventually it became apparent that this structure could most efficiently be administered within a university and, by the time of the Renaissance or shortly thereafter, university-based medical education was the custom in Europe. In fact, the University of Salerno concentrated entirely on medical education.

It was at the University of Leiden early in the eighteenth century that the Dutch physician Herman Boerhaave established a tradition that has persisted to this day: the application of *science* to the *art* of medicine.

John Monroe, a student of Boerhaave's, carried the science/art tradition to Edinburgh where he founded a medical school. From there the tradition was transported to Canada and, eventually, to the United States via William Osler, who studied medicine at McGill University before moving to the University of Pennsylvania and thence to Johns Hopkins University to become that institution's first professor of medicine.

It was the Johns Hopkins medical school which served as a prototype by which all medical schools in the United States were judged in the Abraham Flexner study, 1908-1910. While medical education had gotten off to a good start in the United States (all five medical schools existing in 1790 had university sponsorship), it had strayed from this disciplined path in the nineteenth century.

As William N. Hubbard, Jr., former dean of the University of Michigan Medical School, noted in a recent book chapter:

> Between 1800 and 1860 a new medical school was started about every year, most of them unrelated to a university.... By the end of the Civil War only 46 medical schools remained in the United States, but in the succeeding 30 years the total rose to 160, most of which were run as private enterprises by medical practitioners and had no standard curriculum or academic discipline. In 1900 less than 10 percent of those practicing medicine in the United States were graduates of any regular medical school.[5]

Fortunately for the health of the average American, Flexner's classic study called attention to the sorry plight of medical education in general and was largely responsible for bringing it back within the university fold in the Johns Hopkins pattern. This resulted in an immediate and major increase in emphasis on the development of basic medical science and, ultimately, in the heavier emphasis on basic research in our medical schools.

The association of medical schools with universities, the development of various clinical departments within the medical schools, and finally the introduction of strong basic science departments required an increasingly complex administrative structure. However, despite these developments, in the 1930s and early 1940s medical schools as well as dental schools and nursing schools and schools of pharmacy often were run by part-time deans with small administrative staffs. Department chairmen devoted a relatively small percentage of their time to administration and were able to spend a vast majority of it in their professorial roles.

After World War II, however, a number of changes (e.g., public financing of some aspects of health care, modifications in health sciences curricula, major technological advances, etc.) occurred in the field of health and in health sciences education, and in public expectation of the health professions, which combined to cause an extraordinary change in the structure of health sciences schools, their interrelations, and in their relations to the rest of the university and to society in general. In a period of thirty years, changes have been so profound that they have put enormous stress on the administrative structure of the health sciences schools and the universities and on those responsible for the administration of these institutions. There

has been an associated stress on the faculty of the health sciences schools and to some degree on the students. These developments have resulted in a number of changes in the administrative structure of the health sciences schools and have transformed the functions of the administrative officers of the schools and, of course, the health sciences complex as a whole.

In an excellent article dealing with the administration of health sciences, Edmund Pellegrino, chairman of the board of the Yale–New Haven Medical Center, Inc., has listed four factors which he feels are primarily responsible for the changes:

> The first is the sheer growth in size. Most centers started with a medical school and hospital. They now include as many as eight different professional schools, affiliations with half a dozen or more hospitals, academic relationships with community colleges, and regional responsibilities for health maintenance organizations, area health education centers, regional medical programs, comprehensive health planning and other community organizations. Budgets and physical facilities have paralleled the growth in size and complexity of programs. . . .
>
> The second factor is the increasing assumption of responsibility for service to the communities in which academic centers reside. . . . A third factor is the mounting pressure to effect some equality between the needs of society for certain kinds of manpower and the rate at which that manpower is produced. . . . A fourth factor is the appearance of the concept of professional accountability, which is rapidly being translated into institutional accountability as well. Heretofore, professionals and institutions might vest themselves with responsibilities and be their own judges of the degree to which those responsibilities were fulfilled. Community and consumer participation, federal legislation, and such things as the patient's "bill of rights" underscore the new public interest in continuing assessment and external review of the adequacy of the performance of professionals and institutions.[6]

I would like to mention additional catalysts for change, some of which might well be subsumed under the four noted by Pellegrino. They are: (1) The tremendous increase in new knowledge in the health fields that has occurred in the past thirty years and the related increase in methods of applying this new knowledge in the treatment of patients. These technological advances have resulted in major increases in costs and in the need for many new types of health professional personnel. (2) The rising expectations of the members of the health professions other than medicine. With the rapid growth in size and influence of the schools of medicine, a similar growth has occurred in the other health professional schools. The faculties of these schools have been increasingly interested in participating in a more meaningful

way in patient care, have wanted to share hospital facilities and clinics with physicians, and have begun to train whole new groups of health professionals. These faculties have been very forceful in seeking both additional support from their universities and increasing recognition from all members of society, particularly from the medical profession.

All these pressures and changes made it apparent to most that there was a serious need for administrative coordination of the activities of all the schools of the health professions. Over the course of the past thirty years, a number of different administrative models have been tried, and somewhat varied patterns persist today. However, I believe it is fair to say that by the mid–1970s a fairly common pattern for administration of the health sciences has emerged.

By and large, the schools of the health sciences in American universities are gathered together into a common, relatively loose administrative structure with one administrative head who usually is called the vice-president for health affairs. In many institutions in the recent past this individual was also the dean of medicine, but with increasing frequency the positions have been disjoined and a separate office of vice-president for health affairs has been established.

The degree of authority of the chief administrative officer of the health sciences center has varied considerably. In the past the vice-president more often has been a coordinator who served in a staff capacity to the president. The recent trend, however, very definitely has been toward the assumption of line authority on the part of the vice-president, associated with the assignment of more and more responsibility for the development of overall health sciences policy until, in some instances, he acts for the university president without intervention of any other university officer and actually serves as a co-president for health sciences. Quite obviously, during this transition period from coordinator to strong leader, a good deal of unrest, annoyance, and even hostility developed in some universities among deans and department chairmen in the various health sciences schools, particularly in the medical school. This has been a natural and anticipated development and is, I believe, a transitory state which will abate as presidents and other university officers, on the one hand, become accustomed to the delegation of authority to the vice-president for health affairs and as the deans, on the other hand, learn that the vice-president does indeed have this authority and is not merely another administrative level — some would say stumbling block — between the schools and the senior university policymakers.

Responsibilities defined

Before proceeding to ask some questions regarding the present state of university organization for the health sciences and the implications

for the future, I think it is very important and highly appropriate to ask: what are the proper functions of the university and its health sciences schools in the field of health? Without defining these responsibilities to some degree it is difficult, if not impossible, to try to discuss in any rational way the changes which may be anticipated in the future.

There are clearly many answers to the question I have just raised, and no single short answer can be complete and all-encompassing, but I think it possible to come close. Many would say that the primary responsibility of health sciences schools is the education of health professionals. I think it is far broader than that. The responsibility of the university health sciences is the *improvement of the health of the people*. That includes defining health, measuring health and the medical, social, and economic factors which affect it, studying the attitudes of the people of the nation toward health, and trying to identify ways to modify those attitudes with emphasis on the promotion of health and the prevention of disease. The responsibility also includes the development of new knowledge to improve our understanding and treatment of disease. Above all, it includes the education of professionals in the health fields and in related fields who do all of the above, and, of course, of those professionals who care for the individual health problems of the people.

Issues to be considered

What, then, are some of the issues before us today in the areas of organization and administration of education for health professionals? What are the questions we must ask as we move into the late 1970s and 1980s?

I offer a few. The answers, where they are provided, may be correct, they may not. I can assure you that in some areas, at least, they will be controversial — deliberately so. The issues are extremely complex and the solutions will be equally complex. Therefore, before proceeding let us remind ourselves to paraphrase H. L. Mencken's words:

> For every health problem there is a simple solution, neat, plausible, and wrong.

Let me also say that the following discussion applies primarily to universities with large, multischool health sciences complexes and not so much to institutions with only one or two health sciences schools.

1. *Should a health sciences center remain a part of the university or should it separate and become an independent mini-university?*

Until the last few years, at least, practically all health sciences educators and most university-wide administrators have been strong advocates of integration of the health sciences centers with their parent universities. This trend received great impetus from the recommenda-

tions of Abraham Flexner and was reinforced after World War II with the sudden increase in the demand for more health professionals and the establishment of many new health sciences schools in the United States.

Recently, for a number of reasons, questions concerning the advisability of this move have been raised by a few knowledgeable people. Expressions of concern have related to such factors as: (a) The enormous size, both physical and fiscal, of the modern health sciences center in relationship to the rest of the university. (b) The inability of some university presidents to understand why units in the health sciences center are not exactly like departments in arts and sciences colleges and why they must be managed in a somewhat different way. (c) The increasing number of regulating agencies which affect the day-to-day operation of the health sciences, particularly in the clinical areas. Universities already are subjected to so many calls for "accountability" and to so much regulation by federal, state, and local governmental agencies that the idea of additional regulation by health planning bodies, insurance agencies, and health professional organizations seems almost more than the university administration can bear. On top of that, in recent years, the university president may have been presented with such surprises as an unanticipated, unbudgeted bill for an increase in university liability and malpractice insurance of $2 million or more per year. (d) Conflicts or divergences in the orientation and interests of health sciences faculty and other university faculty resulting in lack of interest, on the part of the former, in participation in university-wide faculty affairs and in lack of understanding, on the part of the latter, of the concerns and interests of the health sciences faculty.

Despite the emergence of these factors and others like them, I believe the advocates of separation are wrong and that it is decidedly in the best interest of all that the health sciences complex remain within the university and, in fact, develop even closer ties with other parts of the university.

The traditional reasons for favoring this marriage include the opportunities for intellectual exchange and the development of interdisciplinary programs, the economies achieved by avoidance of duplication of programs in departments, and the advantages of the pressures on the health sciences from the rest of the university community to maintain high academic standards (a factor which I no longer regard as very important). All continue to apply to some degree at least.

There is another closely related reason to support the continued association of the health-related schools with the rest of the university. As I stated earlier, I feel it is the university's responsibility to look not just to the training of health professionals but to the total national needs in health.

Lester Breslow, the dean of the School of Public Health at the University of California at Los Angeles, has suggested that the university should approach health issues in the same fashion that the land grant colleges approached the problems of agriculture in the past.

As they asked, "What is the state of our nation's agriculture?" today we should ask, "What is the state of our nation's health?" What are our special problems? What can we do to solve these problems — problems of the environment and problems of human behavior as well as the problems of cancer and heart disease? And then we must ask what kinds of resources and what kinds of people are needed to solve the problems. And finally, what are the special strengths in our institution, so that we may better set priorities for the order in which we should tackle the problems?

It is clear that the solutions to many health problems will depend on the contributions of people outside the health field: sociologists, anthropologists, economists, and lawyers, to name a few. It is also clear, therefore, that the development of programs to meet the health needs of the nation — and, indeed, of the world — cannot be left in the hands of the health scientists alone: such programs must have a university-wide orientation.

Furthermore, an increasing number of non-health sciences based university departments are becoming involved in the problems of health care and its delivery. Psychology departments, through clinical psychology programs, are assuming primary responsibility for training practitioners. Schools of social work are training medical social workers. And in some universities schools of business independently are involved in the training of health sciences administrators.

I am convinced that all these efforts should be coordinated to a greater degree than has been the case in most universities in the past and that to have totally independent, overlapping programs in either the health sciences or the rest of the university is a mistake. It would be impossible to achieve such coordination were the health sciences units to separate from the university and become freestanding educational institutions.

From the point of view of the students in the main portion of the university, there are also many potential advantages to the presence of the health sciences faculties on the university campus. I believe very strongly that faculties of the professional schools in the university, and particularly in the health professional schools, should become increasingly involved in teaching university undergraduates. The potential for offering a broad spectrum of stimulating and worthwhile, even "relevant" (a word I find increasingly distasteful) courses is enormous.

I do not refer primarily to courses in health education and self-care, although such courses are certainly important, but to courses in

human behavior and the understanding of disease mechanisms and in fundamental and applied human biology, to name but a few. Because of their orientation to patient care and the teaching of patients, health sciences faculties have a great deal to offer, and mechanisms should be developed within universities to encourage the participation of these faculties in the undergraduate programs.

2. *What should be the role of the chief administrative officer of the health sciences center?*

There has been much informal discussion and debate, most often in the halls at professional meetings, by deans, chairmen, vice-presidents for health affairs, and university presidents of the proper role for the vice-president for health affairs. As I indicated earlier in this paper, there are two main models for the position: that of the staff coordinator and that of the officer with line authority for management of the center delegated by the president.

In these days of increasing concern over the need to modify the health care delivery system and to develop primary care teams comprised of health professionals with many different levels of training, one of the primary functions of the vice-president for health affairs is to effect improved coordination of the patient care programs and curricula of the various health sciences schools. Since this function often is perceived by the deans of the schools as a threat to their autonomy and to their access to the president, most deans, particularly deans of medical schools, have in the past favored the weaker coordinator model over the line manager model. On the other hand, as the administrative loads imposed on presidents of universities have increased, more and more presidents, being only too glad to share what has become an increasingly massive burden, have delegated line management authority to their vice-presidents for health affairs.

As I have indicated, it is apparent that there has been a shift toward the line officer model in recent years, and this role gradually is being accepted by most vice-presidents, and deans as well, as the more appropriate one. It is certainly the role I favor. In fact, I believe it is by far the most workable one for the organization and administration of the education of health professionals in the future.

In many universities, the role of vice-president for health affairs is not clearly defined, however, resulting in confusion and often dissension. I am in complete agreement with Edmund Pellegrino, who has written the most perceptive article on this subject. Pellegrino says:

> A conscious decision must be made in each university about the nature of the position of vice president for health sciences rather than waiting for resolution of ambiguities during some crisis. The expectations of the university president and his other vice presidents may be inconsistent with some of the newer and expanded responsibilities

of the position. Does the university want a staff or line position, a matter too often left ambiguous, creating conflict with other vice presidents? Are the other vice presidents in line with authority over the vice president for health sciences, actually or by default of definition? Can he expect them to serve him as they do the president for those functions he needs and in terms dictated by the special climate of a clinical setting? Lack of clarity on this point creates ill will and animosities in a position too large in its scope for a vague assignment.

Opinions will differ among those who hold this post and among university presidents, but the author believes that if the job is to be done properly, the position must have clear line authority for each of the schools which make up the health sciences center. The vice president for the health sciences is unique in this respect among the other vice presidents in a university, who usually function as the president's staff officers. In fact, if he is to be accountable as the public requires and if he is to create a team out of the diverse schools over which he presides, the vice president for health sciences is really the chief executive and academic officer of a compact but complex mission-oriented mini-university within a larger university.

This fact is not discussed openly enough. It implies considerable overlap with the functions of other vice presidents — for academic affairs, for business and finance, and for graduate studies. The latter positions carry responsibility for the "whole" university. But to what extent should these responsibilities be decentralized to meet the urgent needs of the health sciences centers, especially where there is a hospital along with other programs providing health care to the community? How much duplication is sensible, and how much is divisive? To what extent should policies apply uniformly to all segments of the university, and to what extent do the special needs of the health sciences justify exceptions?

These questions are pertinent to every facet of the operation of a modern-day health sciences center. While there is no one "right" pattern, these questions cannot be answered by default.[7]

3. *What could be done better to integrate the health sciences schools and their programs?*

Here I start with the assumptions (not shared by all), first, that the concept of a more integrated health sciences center is viable, even essential; second, that primary care in the future will be rendered by teams of health professionals with various levels of training and that the ability of the members of these teams to function together will depend, in large part, upon their experience during the educational process; and, third, that it is probable that much research on the nature of health, the factors which affect it, and on the newer models for health care delivery will be carried out by interdisciplinary teams of health professionals and others.

If these assumptions are correct, then it seems useful to explore ways in which the health professional schools could be brought closer together in order to do a better job in education and in applied health-care-oriented research:

(a) One rather obvious step is to encourage the faculties of the health sciences schools to develop conjoint courses wherein students from the various health professions are taught as a body. This already has occurred with some success in a few institutions, but a great deal more could be done.

The development of such joint courses is not easy, and certainly the differences in educational level and in educational needs make it obvious that many, if not most, of the aspects of the educational experience of the various health professional students will remain separate. However, in such areas as public health, epidemiology, and studies of the social aspects of medicine — alcoholism and human sexuality — it would seem both possible and desirable to develop common courses. In the clinical areas as well, some of the many aspects of primary care and of patient follow-up might best be taught in a coordinated, interdisciplinary unit.

(b) Most institutions with health sciences centers have a health sciences–wide board, usually chaired by the vice-president for health affairs and comprised of the deans of the various schools and colleges. These boards sometimes include faculty and, occasionally, student representatives. They have varying degrees of authority over the activities of their component schools.

I believe strongly that it is in the best interest of the health sciences schools themselves to vest a considerable degree of review authority in these boards. Indeed, if there is to be a meaningful integration of the health sciences, such designation of authority is essential. The health sciences boards should have the authority both to review all proposed faculty appointments and promotions in all the schools and colleges and to recommend their approval or denial to the vice-president for health affairs. The boards also should have authority to review proposals for significant new educational programs emanating from each of the health sciences schools — in fact, for all academic plans which have implications for the center as a whole — before they are implemented. Such reviews are one of the best ways to assure the development and maintenance of academic excellence in all the health sciences schools and to avoid fractionalization and duplication of educational programs.

(c) It seems to me that it is time to consider the development of a health sciences–wide faculty structure which could well include students. The university senate might be the most appropriate model for such an organization. An elected health sciences–wide senate with an

elected executive committee could provide very useful advice on such matters as standards and processes for faculty promotion, budgetary allocations among the various schools and colleges, development of joint curricula, standards of patient care in the hospitals, and facilities for ambulatory care. Where appropriate, such a structure could well be integrated with a university-wide senate through cross membership and, therefore, need not be duplicate.

Although the increasing pressures from faculty and students for democratization in the university and for a greater voice in the decision-making process presently are greater in the other parts of the university than in the health sciences, I suspect that it is just a matter of time before these pressures mount in the health sciences as well.

While this concept of a health sciences–wide faculty organization is not likely to be regarded favorably by some faculties on first consideration, in the long run it would be useful. The creation of a health sciences–wide faculty and student organization, instead of augmentation of separate faculty organizations for each school and college, could be a major force for unification.

(d) Another way to encourage the greater integration of health sciences programs might be the development of multidisciplinary, interschool centers or institutes for research in areas of interest common to the faculties and graduate students of all or most schools. The types of research projects which could be carried out would, of course, be limited by the very backgrounds of the participating faculty members.

It would seem to me that the areas suggested for possible joint curriculum development (i.e., some aspects of public health and epidemiology and the social aspects of medicine such as alcoholism and human sexuality) might also lend themselves to joint research programs. Studies of innovative health care delivery models also might be carried out in the environment of such a multidisciplinary center.

(e) Institutions might ask if it is time, once again, to consider merger of some of their existing health professional schools. For example, as the field of dentistry changes, an increasing number of the technical tasks of dental practice will be performed by skilled technical assistants. Professional dentists will then be able to turn more and more to the academic and intellectual aspects of dentistry — augmenting their diagnostic skills, improving their understanding of human behavior as it affects overall patient management, and studying the most advanced methods of treatment. This implies that the training of a dentist will approximate even more closely that of the physician. In addition, the dentist of the future undoubtedly will be less and less a solo practitioner and more and more an integral part of the primary care team.

This all prompts me to ask whether, at some time in the near future, dentistry should become a department of oral biology in the school of medicine or in a new school called neither dentistry nor medicine. I doubt that this proposal will meet with universal acclaim either in schools of dentistry or in schools of medicine at present. But the time may come when it would make sense and, if we are to consider such a move for dentistry, what about the more technically oriented professions which have grown alongside the other health professions but are not usually associated with health sciences centers? Is it time to consider amalgamation of schools of optometry and podiatry, for example? Further, what about consolidation of schools of pharmacy with medical school pharmacology departments?

Schools of public health vary widely in their proximity to, and affinity with, the other health sciences schools. If these schools are separate, all are losers. Every effort should be made to ensure that the school of public health is an integral part of the health sciences center with joint faculty appointments, joint course offerings, joint research projects, and joint service programs. To maintain a separatist position is indeed unfortunate and unwise. The increasing emphasis in our nation on the importance of epidemiological studies, on the one hand, and preventive medicine programs for health education of the public, on the other, makes it clear to me that the schools of public health have a great deal to offer and a great deal to gain by becoming closely integrated with the other health professional schools.

You will note that I have not mentioned consolidation of schools of nursing with other health sciences schools. I suspect that the time for rational consideration of that issue is in the still distant future, since for historical reasons emotions run rather high in this area and the drive for separate but equal status on the part of nursing faculties is very strong. But as equity is gained and professionalism increases, here, too, much more integration will be possible.

(f) One final suggestion for integrating the faculties and students of the health professional schools is far more radical and, hence, controversial than any of the others I have presented. In fact, I do not even know whether this proposal is practical or feasible or whether I believe in it myself. But it is worth presenting for purposes of discussion.

The primary care team of the future will, in my opinion, ideally include professionals trained in all the health professional schools as well as other persons, such as social workers, trained in other schools. Furthermore, nurses, pharmacists, dental technologists, public health professionals, and many others are playing increasingly responsible roles in the rendition of primary care and will be assuming many of the responsibilities traditionally held by physicians and dentists. Since all the

individuals on the primary care team must function together, and since education for primary care is the joint responsibility of the faculties of all health professional schools, would it make sense to base the administration of educational programs for primary care in the office of the vice-president for health affairs? This is admittedly a threatening proposal; one which, were it to be implemented, would require major adjustments. For now, look upon it as an academic exercise. How would such a program be organized? What would be the implications for the educational programs in the school of medicine and in other schools, for example? Would any possible advantages be outweighed by the disadvantages?

Most important, I believe, is the possibility that serious consideration of this kind of a move, even though it may never be implemented, could result in some fresh approaches to the other problems inherent in greater integration of health professional schools.

4. *Should the basic sciences departments in the health sciences be constituted as a separate college in the health sciences center?*

The organizational patterns for the administration of the basic sciences units within the academic health sciences centers are quite varied. Although, traditionally, basic science instruction for students in the various health professional schools has been provided by faculty in basic sciences units within each of the schools, since World War II there has been a strong trend toward development of single departments in the basic sciences. These departments almost always are based in the school of medicine, yet they have responsibility for teaching students from all the health professional schools.

It now seems appropriate to ask whether all basic sciences departments should constitute a separate college of basic sciences within the health sciences center. In fact, in one or two newly established health sciences complexes (e.g., the State University of New York–Stony Brook and the University of Texas–San Antonio) this is already the case. It seems to me that, under any circumstances, the maintenance of separate basic sciences departments in each of the schools is wasteful and duplicative, does not lead to strong departments, and reduces the ability to attract excellent basic sciences faculty in any school but the medical school.

But even where there is only one combined basic sciences department based in the medical school, there are some pressures for change. In most universities where this latter circumstance pertains, the faculty and students of the schools other than the medical school complain, rightly or wrongly, that they are made to feel like second-class citizens and get second-class instruction because the primary loyalty of the basic sciences faculty is to its own graduate programs, secondary loyalty is to the medical school and the teaching of medical students, and least con-

sideration is given to the other students. Some of the faculty in the other schools, and indeed some faculty in the basic sciences departments, have argued that this situation would improve if a separate college structure were established for the basic sciences.

In addition, in medical schools -- and more recently in dental and nursing schools as well as some of the other health sciences schools — new innovative, less departmentally oriented curricula have been developed, and some faculty members of the medical school have become more involved with new models for patient care while other medical faculty persons have developed increasing sophistication in the basic sciences themselves. In these circumstances, the faculty in the basic sciences departments has tended to feel neglected unless well supported financially. It can be predicted that these situations will continue.

All in all, provided there is meaningful movement toward better integration of all the schools of the health sciences complex and where there is a vice-president for health affairs with line responsibility, I find myself favoring the development of a separate college of basic sciences. Although health sciences centers obviously vary greatly and such a move may not be advisable for all, I believe that, in general, both the basic sciences departments and the professional schools will benefit by the creation of a separate college.

5. *Should universities and their health sciences centers continue to own and manage hospitals and, if so, should university hospitals and their directors be under the management and control of the dean of the medical school or the vice-president for health affairs?*

Until very recently it has been accepted almost as a maxim by most medical school administrators and faculty (and to a lesser degree by the faculties of the other health professional schools) that it is highly desirable, indeed essential, that — in the long run at least — a university hospital under the control of the university should be an integral part of the health sciences center. It has been felt that only through ownership, or at least management authority, by the administration and faculty could the proper control over teaching, research, and patient care by the faculty be maintained. More recently, with signs of increasing cooperation between medical school faculty and practicing physicians developing in some areas of the country, with the expanding burden of federal, state, and local regulations and their profound effects on hospital management, and with increasing demands from hospital area communities that they be allowed to participate in hospital governance and that the hospitals become more concerned with community needs, a few people have begun to question the necessity or desirability of direct management of hospitals by the university.

In a recent address to the Association for Academic Health Centers

entitled "The Teaching Hospital: A Community or University Institution?" Dr. Russell Nelson, president emeritus of the Johns Hopkins Hospital, said:

> To me the balance of forces suggests that universities should take reasonable, practical and feasible steps to spin off the control and responsibility for teaching hospitals as much as possible and let them become more independent community institutions. At the same time the university should develop conditions assuring that it, the university, has full responsibility and authority over education, research, and professional standards which are its sole domain and essential to its academic function. Medical schools are no longer weak, struggling institutions needing to control everything. They are abundantly strong enough to maintain their professional dominance without taking on the headaches of all the remainder.[8]

It is an interesting and intriguing opinion, but I'm afraid I don't agree. It is exactly *because* of these new pressures and their implications for the administration of hospitals in the future and the education of health professionals and health managers that I feel universities should continue to manage teaching hospitals and to use these community pressures, regulations, and their implications in the development of new educational and research programs. Education of health professionals and hospital managers should include experience in working under regulatory controls, and learning how both to study their effects and to recommend modifications in those that are not appropriate. I will discuss this issue more after asking the next closely related question.

As to the issue of whether the hospital director should be responsible to the dean of the medical school or to the vice-president for health affairs: over the course of the past ten years I have reversed my position completely on this matter and now feel strongly that the director should be responsible to the vice-president. Until fairly recently, the university hospital has been regarded as a form of teaching laboratory for the medical school. The needs of nursing education were met by accommodation to the medical programs, and other health sciences schools had little interest in hospital-based educational programs. But this has changed with the advent of health management programs, training programs for physicians' assistants based in the schools of public health, the increasing interest of nursing faculty in assuming responsibility for more aspects of patient care as evidenced by the creation of nurse-practitioner programs, major revisions in the education of pharmacists including the development of clinical pharmacy specialists, and the increasing concern of dental educators with hospital-based dental and oral surgery programs. It therefore is appropriate that the hospital management try to be responsive to this

much broader array of interests, and it is better able to do so when the hospital director is responsible to the vice-president for health affairs.

6. *To what extent should health sciences center operations and facilities and the faculty, staff, and students who work in them be governed by outside governmental planning and regulatory agencies?*

The obvious answer to this is: as little as possible. A bewildering number of regulations now imposed upon universities and on the health sciences segments of universities in particular are indeed annoying, time consuming, and sometimes just plain wrong. I feel that we all have an obligation to try to convince our governments to develop regulations only where they are essential to the welfare of society and, when they are developed, to keep them as simple as possible.

But should university health sciences institutions and programs claim exemptions from regulations which apply to other, similar nonuniversity operations? I think not. Not only do I believe that such exemption no longer is possible, but I also believe that great opportunities for education and research are to be found through participation with community agencies and others in the regulatory process.

Let me cite one example: two years ago the Congress of the United States passed what is perhaps the most significant piece of health legislation in many, many years. It is the National Health Planning and Resources Development Act of 1974, Public Law 93-641. As it is implemented, this law will result in very significant changes in the delivery of health services in the United States. Many of the current programs that impact our health delivery system, such as Comprehensive Health Planning and Regional Medical Programs, as well as various others that assess and improve the quality of health care, are subsumed under its provisions. This law is of particular significance to universities and their health professional schools because, in my view, universities, their faculties, and students cannot, *and should not,* avoid a major involvement in the implementation of the changes it envisions. *This will represent a major departure for most universities.* It will require the development of cooperative programs with both governmental and nongovernmental agencies. I am convinced the provisions of this Act are so broad and so far-reaching, and reflect so clearly a societal mandate for change, that universities are obligated to participate in their implementation; in fact, to join in partnerships with nonuniversity agencies to that end. Because the law is so broad, it represents a fair summary of many, if not most, of the perceived societal needs for changes in the delivery system.

This legislation establishes national guidelines for health planning, including standards affecting the appropriate supply, distribution, and organization of health resources. It calls for the development of long-

range health systems plans and short-range annual implementation plans on an area-wide basis to achieve the goals of increasing accessibility, acceptability, continuity, and quality of health services, while restraining increases in the costs of those services. It also calls for creation of state-wide agencies which must approve capital facility expansion and administer state certificate-of-need programs. Among many other things, the law authorizes the Secretary of Health, Education, and Welfare to support centers for health planning that will engage in studies to improve planning techniques and will provide technical and consulting assistance to the health systems agencies and state agencies.

I believe that the broad provisions of this bill represent a clear public mandate for changes in the delivery system and for the participation of universities in the planning, development, and implementation of those changes.

From a selfish point of view, I believe the implementation of the changes will have such a profound effect on universities and their academic health centers that it would be very foolish for university communities to separate themselves from these activities.

There are many ways in which university faculty and students might participate in the implementation of this Act to the benefit of both the educational and research programs of the university and society as a whole. To cite a few:

(a) If the broad provisions of the Act are to be carried out effectively, they will require participation of most of our university-based experts in the field of health planning and health policy. The Act clearly reflects society's conviction that new approaches to planning the health delivery system are needed. Of course, such planning is dependent upon the development of appropriate health policies to guide the planning. Members of the university community can, and should, lead in the study, development, and evaluation of health policy designed to effect implementation of the Act's provisions.

(b) The centers for health planning which are called for might well be based in our universities; provided, of course, that their studies relate directly to various aspects of health services delivery.

(c) A few universities currently are involved in the development of experimental models for new delivery systems. Such projects clearly are mandated in the 1974 Act. It seems appropriate that university faculties lead in the development of such models. To the extent that new delivery system models depend on new types of health professionals or revised definitions of the appropriate roles of existing health professionals and new interrelationships between them, university faculties cannot avoid active involvement. If there are to be new types of health professionals, it will be the responsibility of universities to develop

training programs for them. If health professionals are to learn to work together in new ways, they must be taught to do so in the course of their education.

(d) The Act also requires study of ways in which rate regulation in the health field can best be carried out. Here, too, it is quite appropriate that university faculties, including economists, political scientists, and business school faculty, be involved, and, in fact, play major leadership roles. Rate regulation requires an ability to measure costs of health care, not merely costs of the individual services provided but actual costs related to output factors including measurement of the effectiveness of various health care processes. The measurement of costs and means of controlling costs are both very appropriate matters for research and pilot studies by university faculty and students.

(e) The Act calls for improvements in the application of principles of disease prevention and for studies of additional ways to prevent disease. This implies active preventive measures, conducted by health professionals, and improvements both in the health education of the public and in the understanding of self-care by that public. Clearly there are many aspects of this broad field that are the responsibility of university-based professionals.

And finally:

(f) Certainly one of the most significant aspects of recent legislation is the concern for better measurement and evaluation of the quality of health care. In recent years we have become increasingly aware of how limited our knowledge of this factor is. There is a great need for research in this critical area. The evaluation of quality is essential if any major improvements in the delivery system are to be made. This is a fertile area for university-based study and a field in which university faculty might well contribute the most to the development of improved delivery systems.

Summary

I have tried in this paper to outline briefly some of the changes occurring in universities that affect the ways in which these universities are administered, in an attempt to set in some perspective the subsequent discussion of administration of education for the health professions. I also have reviewed some of the historical events that were responsible for the changing administrative structures in medical schools and in the various other health sciences units. And I have taken a position regarding the role of the vice-president for health affairs in the modern health sciences center. Finally, I have asked several questions which I believe to be very pertinent to the examination of administrative structures for the future and, indeed, to changes in the curricula of health sciences schools themselves.

It is clear indeed that changes in the health field, both scientific and social, have been dramatic and have occurred rapidly in recent years. In many ways these changes have paralleled changes in the university as a whole. Changes in the university certainly have affected the health sciences area, and changes in the health sciences area have had a profound effect on university administration as well.

As to the future: I am certain that many of the changes I have tried to anticipate in this paper will come about. And I am even more certain that, whatever the nature of the changes, they will occur with increasing rapidity in the next years.

Footnotes

1. Henry, David D., *Challenges Past, Challenges Present* (An Analysis of American Higher Education Since 1930). 1975. Pp. 135-136.
2. Ibid., pp. 136-137.
3. Perkins, James A., *The University as an Organization*. A Report for the Carnegie Commission on Higher Education. 1973. P. 3.
4. Ibid., pp. 258-259.
5. Hubbard, William N., Jr., Health Knowledge, Chapter 4 of *The American Assembly: The Health of Americans*. 1970. P. 114.
6. Pellegrino, Edmund D., "The Academic Role of the Vice President for Health Sciences: Can a Walrus Become a Unicorn?" *Journal of Medical Education*, Vol. 50, March, 1975. P. 224.
7. Ibid., pp. 225-226.
8. Nelson, Russell A., "The Teaching Hospital: A Community or a University Institution?" A paper presented at the Annual Meeting of the Association for Academic Health Centers. San Juan, Puerto Rico, October 3, 1975.

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Heaney, Robert P., "Interdisciplinary Integration in the Health Sciences Curricula." *Transactions of the New York Academy of Sciences*, Vol. 36, April, 1974.

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Comments, Questions, and Discussion

Following the address representatives of three levels of administration were invited to comment. After a response from Dr. Hogness, more general discussion took place.

The invited discussants were John E. Corbally, President, University of Illinois; Thomas F. Zimmerman, Dean, School of Associated Medical Sciences, University of Illinois at the Medical Center; and George Gee Jackson, Professor of Medicine, Abraham Lincoln School of Medicine, University of Illinois at the Medical Center. George E. Miller, Professor of Medical Education, Center for Educational Development, University of Illinois at the Medical Center, served as moderator for the session.

President John E. Corbally: First, as one of John Hogness's alumni, I am always critical of how my president is handling my alma mater. I would like to say that he did an excellent job today, I think, not only of pinpointing some of the concerns of administration of education in the health professions but of administration in higher education in general. I was particularly struck by two things. First, I was interested in the repeated use of the word "line" administration. In my own analysis of university administration and perhaps educational administration in general, I have reached the conclusion that the terms "line" and "staff" are somewhat misleading. They seem more often related to the impact of what an individual says or does in terms of operational decisions than to whether that person is defined as being "line" or "staff." The educational organizational chart of most universities is so complex, with so many lines relating to different kinds of decisions, that I am not totally sure that the question of whether a particular officer is designated "line" and/or "staff" assists things too much.

Second, Dr. Hogness, it seems clear to me that in spite of your ascension to the university presidency, you still have the common misapprehension of a physician that medicine is in some way unique as a field of study and therefore needs some kind of special attention from uni-

versity administration as opposed to, perhaps, liberal arts and sciences, agriculture, or educational administration. I am always interested in listening to the arguments of representatives of various professions and scholarly disciplines which indicate why their particular cluster is unique and thus needs to be elevated to a special level within a university, but so far I have remained unconvinced.

It was a magnificent presentation, and I have selected these two things on which there might be some difference in viewpoints as a means of initiating further discussion.

Dean Thomas F. Zimmerman: Let me first summarize Dr. Hogness's positions, as I understand them, on the six issues he has addressed: (1) health science centers should remain a part of the organic university; (2) the role of the chief administrator of the health science center should be strengthened, and he should, in effect, operate as a "co-president" within the larger university structure; (3) the colleges and schools of the health science center should be actively led in the direction of integration of their program elements; (4) basic science departments should be reorganized as campus-wide schools, removed from the medical curriculum; (5) the university hospital should be managed at a campus level and definitely outside of the college of medicine; (6) the health science center should be "proactive" rather than "reactive" in accommodating to the external regulations which impinge upon its operations.

I see implicit in these issues and the position Dr. Hogness has taken on them four distinct directions which I would choose to identify and to ask Dr. Hogness to comment on.

Medical centers should, in name and fact, become health science centers. I would concur that this is not only a viable goal but a necessary direction to respond both to external demands and to change internal priorities. It is important to understand that this is a "goal" and not a description of the present state.

The "center of gravity" for the health science center must shift to outside the medical school/college unit. Medical education has been and continues to be the preoccupation of the traditional medical center. The many decisions which transcend the interests of medical center units must be made through the broadest possible forum and should reflect the concerns of the total campus enterprise.

Administration of health science centers must move toward active management. Management of the health science center campus must be willing to confront many internal conflicts. The health science center organization must be led beyond confederation. Administrators must be prepared to challenge professionally motivated self-interests.

It will become increasingly important to align the mission of the health science center to societal needs. This will require results-oriented

management on the part of health science center administration. Accountability to the funders of the health science centers will be increasingly required.

I would also like to comment briefly on the methods Dr. Hogness suggests for accomplishing the integration of disparate units of the health sciences center. The initiation of conjoint courses alone is cosmetic and superficial integration. This accomplishes nothing more than placing students of disparate disciplines in parallel learning experiences. The "campus board," as a method for integrating the health science center, would probably do little to move beyond confederation. Observation of medical center senates would lead me to believe that this is a step sideways rather than forward.

Campus-wide faculty organization does present a holistic view. As such, it could provide a way to visualize a system of interdependent educational programs and services. It is within this framework that I would see the possibility of mergers and consolidations. The effort would probably foster centripetal rather than centrifugal forces.

I am intrigued by Dr. Hogness's speculative idea of basing administration of special units at the campus level, reporting directly to the chief administrative officer. This may, in fact, be a good short-term solution to assuring accountability for priority issues and demands where it is now very difficult to achieve a clear-cut organizational response. This could be useful in providing staging areas or temporary organizations to get on with some very important activities. Such moves would definitely generate constructive tension within the system. It would have the effect of making the many private agendas for *not* doing things public and, therefore, more possible to manage. It would assure that resources are more directly related to intended products.

Professor George Gee Jackson: Through most of my time with the University, David Dodds Henry was the senior administrative officer. Seeing him again brings with some nostalgia a recollection of the opportunities we had when he called together groups of one hundred faculty members. With our colleagues in English, history, and physics, etc., we had a chance to discuss and try to adjust the course of the University. Now it is quite clear that those things of which Dr. Hogness spoke, primarily size, have caused necessary changes. In some respects I have doubt that they are good programmatic changes.

I am speaking as a faculty member with a different vantage point from someone who is primarily engaged in administration. My first response is that the number of problems Dr. Hogness outlined for us to solve is so overwhelming that one approaches the task with a certain amount of despair. I would guess that the quote from Mencken is correct, that solutions can be perceived, simple, and are wrong. So I have a little uneasiness about our wisdom and ability to attack such

a broad front of social problems as those before us. Often the price one pays for a certain course of action is a hidden part of the iceberg not recognized in planned solutions of other problems. Desirable qualities that are given up in the change may go unrecognized for a generation or so.

My second response is to question whether preplanning, which any administrator and scientist would agree is proper, will solve some of the problems that are ahead of us, even if the plan is a wise one. So many factors beyond our control, primarily social, political, and economic but also academic and attitudinal, impinge on and direct action regardless of the plan devised.

A third area I would identify for discussion, and accept with uneasiness, concerns executive review boards. This is a natural course of administrative responsibility but one that is always individually restrictive. The challenge is to preserve academic freedom while devising mechanisms that will help to improve standards and provide motivation. Mostly such boards are a response to size, cost, and complexity of the administrative unit. The merger of schools or other units is, so far as I am concerned, a mechanical manipulation that has no serious content in terms of what our end product and accomplishments will be. The relationship can on occasion be inverse.

In summing up those three areas, I would say that on this campus we have accomplished many of the administrative propositions that Dr. Hogness has identified as future needs, and has also identified as controversial, which they are.

But I also want to pursue another theme. Dr. Hogness and I both have roots in biology and medicine. When I am faced with problems that are beyond my wisdom I have found it useful to draw analogies from biology. One can usually find a micro or a macro model of the problems we have. In this context I suggest that the cell is a unit that has these complex problems of growth, and that cell biology provides for us one of the models for analysis of administration. In its evolution the cell has faced as many adversities and occasional stimulating environments as any unit with which we are familiar. It has withstood antibiotics or inhibitory factors (anti-intellectualism in the analogy with an academic institution) and nutritional deficiencies (fiscal constraints), and as part of a tissue or organ system it works in concert to provide functional services for other members of the whole. So I would like to reflect on the analogy of the cell to see how we can preserve the intellectual university function that you have identified as its tradition. It is the genetic material, i.e, the intellectual function, in the cell which directs its activity; it has structural genes and effector genes. The administration is largely a structural gene. It provides the facilities, the environment, and the mechanisms by which the operational

effects take place. The faculty role is that of the effector genes. These genes are expressed in the cell at the ribosome which has two components in close apposition, a small one (30°) and a larger one (50°). In medical education the first of these components is the basic science school and the latter component the clinical experience. The activity at the ribosome is the translation of messages and the creation of a product. That I view also as our process and our responsibility. These messenger and transfer functions of an excellent faculty can provide a well-prepared product. It is the product, an educated student and physician, upon whom we must rely for solution to the changing environmental needs and problems.

In the growth of a cell there are feedback mechanisms between the structural and functional genes. They work sequentially and in tandem, each stimulating or suppressing certain processes. In microbiology and perhaps in society it is common for the structural genes to produce an excess number of units. Some of these are only cell envelopes without any replicative material inside. In the case of microbes they are noninfective; in this context I would say noneffective. Usually the process is only as insurance for survival of the basic heritage. Occasionally, however, we have had to recognize the toxicity and disease resulting from overproduction of structural components without inner core.

A common host response to the introduction of foreign material is the formation of giant cells by merger of independent units. Usually these are a sign of disease, and some of your descriptions make me uneasy that we are creating giant cells now, or will be in the future, which could be a pathologic omen. At the intracellular level there also can be difficulties in the effector system, the faculty. Sometimes there is such excessive intracellular activity that the products rupture the structure. The result is a nonfunctional environment with loss of all integrated activity.

Thus the lessons from nature are that in perfect operation there is a basic endowment or mission with feedback information to provide a balance between the programmed facilities and the operative translating messenger and the transfer units. I suggest that in a university, as well as a medical center within that university, the basic endowment and traditional functions are the preservation, transmission, and generation of knowledge about health and disease. When we engage too heavily in service functions and extend our reach for perceived solutions to changing sociopolitical problems, we run the risk of losing the kernel of university function that has given it distinction through the centuries. My challenge at this time is whether we can identify that genetic material for which we, the university community, have a fundamental responsibility for preserving and do so valiantly with proper

adaptation in the period of heavy consumer demands, technical plethora, and fiscal strain. The need for health care and a better understanding of disease are going to be continuing problems we cannot solve. The former is a subjective state: relative, personal, political, social, and economic. Most economists and, I think, most health scientists have learned that those are problems that the medical school and the biological scientist are ill prepared to remove. The demand is inelastic, infinite, and ultimately too costly. Therefore we must look very carefully to the survival of those units where we have the intellectual and biological capacity for determining better methods of preventing disease, reversing pathological conditions, and improving health. That is my plea in this forum in which we have together both administrative and faculty components of an education system. Our mission in health education is finite and precious. So must be our aim in the development of administrative programs for university participation for satisfying the health needs, preplanning the use of resources, merging units, and creating executive review boards. Hopefully the administrative structure that is evolved will permit us to recognize the worth of the component parts of a university health center and educational system and effect a cooperative and productive effort.

Dr. Hogness: I won't try to respond to all the points made by President Corbally, Dean Zimmerman, and Dr. Jackson, but I would like to comment on a few.

As far as the matter of "line versus staff" designation is concerned, I tend to agree that the differences are sometimes artificial. What I really want to emphasize is the importance of providing for a vice-president the authority to make the kinds of decisions and to take the kinds of action for the health sciences center that the president does for the overall university. With increasing democratization in our faculty, we are obviously going to see less and less real line authority and much more decision making after more extensive consultation with faculty and students. That in itself will change what we now mean by line assignments.

As for having a special viewpoint about health center administration because I am a physician, I suspect President Corbally is right. However, now that I am a university president I am even more convinced that it is important to have a vice-president for health affairs than I was when I occupied such a post. I think there *is* a special case to be made for this role. It is based upon the need to bring together the schools of the health sciences.

As for the point relating to style of administration that was made by both Dean Zimmerman and Dr. Jackson, I detected an implication that because I suggested there should be a vice-president with

authority, he should be authoritarian. There is a real difference between position and style. I believe very strongly that it is the function of administration to serve the faculty and students, to provide a milieu where both can "do their thing," if you will. However, another function of administration is to encourage, to lead, and to bring about through consensus meaningful responses to social change. That is really the essential text of this paper — the need to recognize and to respond to the tremendous social changes that are going on. I agree with Dr. Jackson that the problems seem overwhelming, yet I am also convinced that we will not accomplish anything by shoving them under the rug.

As for the matter of preplanning, having said all I have said today, I find myself in substantial agreement with Dr. Jackson. It is very discouraging to develop a long-range plan and then find out the legislature doesn't agree with the need to fund that plan and it goes into a wastebasket. I sometimes wonder if we should just forget planning and simply respond to crisis. I don't like that from either an organizational or a rational point of view, but unfortunately it is what we do more often than not.

I also agree that it would be a serious mistake to let the service functions of the university in general or the medical center specifically overwhelm the academic issues, problems, and needs. A university must be very careful that taking on some service is not accomplished at the expense of education and research. I don't think it is necessary for all faculty members in the medical school or the other health sciences schools to be involved in providing professional services. I do believe that in some areas, such as the evaluation of quality of health services for example, there is a need for faculty who are concerned with those things.

As for the excess of structural genes, I am quite aware of the problems Dr. Jackson raised. I don't think the existence of a vice-president for health affairs or an equivalent person represents excessive structure, although as a president who inherited an organization with nine vice-presidents I can assure you that I am very sensitive to the problems inherent in such a situation.

Questioner: Dr. Hogness, you have had an impressive series of administrative responsibilities. My question is, and I hope you will treat it as a serious question and not as an editorial comment, how much of your present philosophy as presented today is existential? Or, asked another way, is your present philosophy more a consequence of where you now find yourself as president, or a philosophy which evolved because of the cumulative effect of a series of administrative experiences on the way to becoming a president?

Dr. Hogness: I think my philosophy is certainly one that evolved over the years. It has changed a great deal from that which I had as dean of the school of medicine. I like to think that the change has occurred in response to societal change rather than to change in my administrative role. To be honest about it, however, I think it is a combination of both.

Questioner: Dr. Hogness, when you talked about a team in the provision of health care, I did not hear you mention the role of the consumer. Is there a role for the consumer?

Dr. Hogness: I could talk for hours on that by approaching it from different points of view. Let me try just two.

First, let us speak of the consumer as an individual patient. Here it is essential to define very carefully the actual responsibility of team members and to establish a system that avoids fractionalization of care in dealing with the patient. I am convinced that this can be done in a way that allows a patient to deal most of the time with one individual on the team. It will be necessary to deal from time to time with other specially trained members of the team for particular medical and social problems that influence health, but there must be one individual who is primarily responsible for coordinating the efforts.

If we talk about the role of consumer groups, it is obvious that the perceived need for their input into policymaking has increased tremendously over the years, and I think quite appropriately so. If as health professionals we seek the opinions of people in our communities, we learn a great deal from them. As time goes on we will define better and better where the consumer should have some input, for example on policy issues that relate to such organizational matters as the way the clinics are set up, and where such input is inappropriate, for example in professional decision making. If we define the differences between these two elements, I think the threat perceived by the professional from the consumer will dwindle or even disappear.

Questioner: Temple University has been trying to implement competency-based education on a university-wide basis. Do you see this kind of approach spreading to other universities, and particularly to health professions schools?

Dr. Hogness: I am not sure I am competent to talk about that. I do not know the Temple program. I do feel, however, that we will be seeing in the health sciences area and in some degree the other professional schools a very definite change toward education of different types of individuals to play specific roles in the health care team. We will certainly be seeing a number of physician extenders of various kinds, for example the Medex on one hand and the nurse-practitioner on the

other — people whose training is neither as long nor as deep as that of the physician, but qualified to do many things the physician now does and to do them quite competently.

Dr. Corbally: I wonder if I too might comment. It seems to me that a major danger in competency-based education, at least as I hear it described, is that it is a response to something President Hogness mentioned earlier — accountability. In higher education we are inclined to say that we are educating students primarily to be participating citizens in a democracy, and only secondarily for occupations or vocations. Then people begin to ask us what we mean by preparing students to be "participating citizens." Finally, in a kind of desperation because these questions come so frequently, we decide to list the competencies we are going to help our students achieve through their education. Although we believe we know what a university should be, the specification of these competencies leads, in my view, to even narrower definition of things that can be measured and increasing neglect of the things Dr. Hogness has been talking about, the ability of people to relate to one another in providing services and care, the ability of people to interpret problems in a rapidly changing world, which are very difficult to measure. It goes back to Dr. Jackson's question about preplanning. If we start today and say we are going to prepare students to pass tests that measure specific competencies four years from now, we imply that we know today the competencies they are going to need at the end of their collegiate education. As I have read about them, I find competency-based programs much more an effort to respond to accountability questions. The education they define may even be counter to the kind Dr. Hogness implied universities should be doing.

Dr. Jackson: May I also respond because one of the things I had in mind when I mentioned the unrecognized price of programming addressed itself to that issue. I share to some extent with many of my colleagues a view that we are the captives of our own system of believing we can now quantitate and reduce to some kind of program language almost every virtue and commodity of life. Doing so is obviously pseudomeasurement, pseudoquantification. What disappears from the student/instructor, and maybe even the doctor/patient relationship, under these circumstances are some of the spiritual values, some of the romantic and mystical values, if you will, that have been a traditional part of learning. Interpersonal communication cannot be reduced to an IBM program code or to a set of objectives. Rational objectives are both important and necessary, but we must avoid the belief that by fulfilling those objectives that have been specified we have accomplished the whole task of education. My concern is that the excitement of learning, the thrill of inquiry, and some of the other intangible

aspects of interpersonal relationships are under attack in our present technological and accounting system.

Dr. George E. Miller: Dr. Hogness, one of the administrative questions you raised called for consideration of the merger of health professions schools. Dr. Jackson has suggested that merger is mechanistic, not substantive. I wonder if you would pursue this issue further. Was this a serious question or were you simply trying to provoke us into thinking of new ways to organize education for the health professions?

Dr. Hogness: First, if mergers are merely mechanistic, then there obviously would be no educational point in carrying them out. My purpose was to suggest that by bringing these schools closer together they might function in a more unified manner. I am really not at all concerned whether the dental school and the medical school are one administrative unit or two if they can live and work together. I think it is possible that more sharing of programs might be accomplished by administrative merger, but unless it were accompanied by faculty commitment, merger would be meaningless.

Questioner: You mentioned the possible shift of research to nonuniversity settings. How then do you see the findings of such research being brought back into the university and its educational programs?

Dr. Hogness: First, the comment about shifting research out of the educational institutions was not mine, it was a quotation from Perkins. I do agree, however, that it may be a trend. I believe he was thinking about large-scale research, such as the movement of a big program like the National Center for Atmospheric Research out of universities, rather than the research carried out by an individual faculty person. It would be a great mistake to advocate moving all research out of universities. For then they would no longer be universities. Certainly in the health science areas maintenance of strong research is essential. I think we must, in the next ten years, see new kinds of research programs that are more related to the health services delivery systems. But that does not mean advocacy of abandoning more fundamental investigator-initiated research. It is true that these kinds of proposals I have made today and the kinds of issues I have been raising seem to threaten some medical school faculty members more than those in other faculties. They feel that some of these things wou d downgrade the quality of medical school programs by requiring faculty to assume more responsibility for patient care, for experimental health service delivery systems, or similar things. I honestly do not believe that need be the case. In fact, I do not think it would be the case. Programs may change, even as medical curricula have changed over the years, but quality need not.

Questioner: Dr. Hogness, I would like to pursue two points. It is clear that there is a growing demand for universities to get into the service area. They are established institutions and as society has gotten into progressive difficulty on one front or another, it has turned to these institutions in seeking solutions, even to the point of holding the institutions accountable for finding solutions. In the health care arena, many of these problems are economic in origin. It is pointless to hold the university accountable for solving problems so far beyond its ken and purview, and for universities to imply acceptance of such a responsibility is perhaps the biggest mistake we could make. I think the university has fallen on bad times in part because society, in looking for answers, has turned to institutions which simply were not structured in the first place to deal with anything on that great scale.

The second point relates to planning. In any political system, planning is a very difficult exercise. Society seems to run by responding to crisis more than to long-range plans, perhaps because people always opt for short-term gain. Huge institutions, like society at large, find it very difficult to sacrifice short-term gains to achieve long-term goals. Can we really plan long-term without the support which comes from widespread discomfort with the way things are?

Dr. Hogness: I am sure others will also want to comment on some of those points. Essentially, I agree with them. The university *has* become a fall guy in many ways, and there is a risk in taking on too much. I do feel, however, that there are a number of problems coming at us, in the health care delivery area particularly, where we have some unique expertise and should contribute as best we can. Obviously, there is a risk in trying to solve problems that are insoluble. We must guard against that continuously. The main point, though, is that in the past we have tended as universities to feel we should be exempted from certain regulations. For example, our university hospitals have tended to say that they should not be dealt with like other institutions in terms of acquisition of expensive equipment or building additional beds and so forth. I think those days are gone. We must become involved in regionalization of health facilities. There will be limits on the expensive equipment a university hospital buys just as there are limits on that which a nonuniversity hospital buys.

As far as planning is concerned, I realize that long-range efforts are very difficult. Usually by the time the plan is finished, the circumstances have changed, which really means that planning is never finished. I am still not willing to give up the idea that we might be able to gain something by planning, but I don't think our ability to plan in university affairs, in health science affairs, is anywhere near perfect. It is very imperfect.

President Corbally: I would like to comment on the first point about universities being fall guys. To some extent universities have themselves to blame. I have the opportunity to read a great many grant and contract proposals submitted to funding agencies by faculty members, and I get the clear impression that if the twenty, thirty, or forty million dollars called for in just a few of these proposals were to be forthcoming, 50 percent of the major social problems in American society would be solved. As universities we did not make a major protest when the Congress, through the National Defense Education Act, undertook to say that education could save the society from Sputnik, or that education could through a variety of centers and special programs create international peace, understanding, and security and so forth. If we are going to be less than willing to take the blame for social failings, we also need to be less than willing to claim all the credit for social success. We do have some problems, I think, in that area.

Questioner: Dr. Hogness, you suggested the possible merger of colleges of medicine and dentistry. Then you went on to mobilize arguments in favor of a college of basic sciences. Are these arguments in conflict with one another?

Dr. Hogness: That thought occurred to me several times during the preparation of the paper. But I don't really think they are. The reason for separating the basic sciences would be to give all of the units a better break — to let them work more effectively together.

Questioner: President Hogness, in the early part of your address you referred to the financial crisis higher education is facing today, but you didn't carry that subject much further. It is apparent that in institutions of higher learning there is a growing movement for collective bargaining between faculty and administration. Is this occurring in the medical centers of the country? And if your answer is in the affirmative, what effect would this have on academic achievement and professional distinction for medical centers?

Dr. Hogness: First, there is no question that higher education is in serious difficulty from a financing point of view. Some institutions are worse off than others, but the problem is national in scope. It is my impression that so far the health sciences have been less seriously hurt than the rest of the university. This relates in part to the large amount of federal funds they receive, funds which have not been cut as much as many feared, and in part to the fact that medical schools, even in state financed institutions, have been able to attract a fair amount of private money. I don't think that the health sciences schools will escape in the future as well as they have in the past. The crunch will soon

hit these schools too. I don't think the universities will be out of difficulties for a number of years. For this is not just a passing financial pinch. I think it is going to be with us for at least ten years, maybe longer.

Collective bargaining is already a reality in some places and is coming soon in many more. I think it is an extremely unfortunate development which will lead to major changes and resulting deterioration of the very important conditions that are essential to the health of universities. The health sciences schools, because they tend to be a little Germanic in their attitude toward organization and toward administration, might not move to collective bargaining as early as the rest of the universities if they were allowed to be separate from the rest of the institution, but I think ultimately it will happen in the health sciences schools as well. That is a very pessimistic statement and I hope I am wrong.

Dr. Miller: As we come to the end of this forum let me ask whether panel members have any concluding remarks.

Dr. Jackson: Let me return to the intertwined issues of responsibility for education and service. In the university setting service functions must have an instructional component. Service simply to meet some need of society is of secondary importance. Therefore, each time we consider taking on new personnel and responsibility for providing services, we must ask to what degree it provides an instructional component for students. Because Dr. Hogness's remarks in large part reflected current social needs and how they interdigitate with medical school functions, I suggest that the other orientation is more important, that is the students' needs. For if we do not meet our students' needs, then social needs will clearly be unmet. Therefore, I believe we should avoid the provision of health care services or any other services except those that are unique university functions.

Dean Zimmerman: What I have heard in Dr. Hogness's remarks, and which I strongly support, is a call for rather dramatic restructuring of health professions schools in the direction of becoming parts of an integrated health science center, and seeing many new roles emerge in the process of decision making. In listening to several of the comments about what the university offers in terms of service, what should be the direction of our growth and development, I think we need to test very carefully whether what we propose is a solution to the problems we face, or a part of those problems. Frequently, we are victimized by our own sense of urgency of what we would like to do as professional groups. That really does need to be brought into some kind of larger balance keyed to student interests, as well as to the larger issues of social needs.

President Corbally: I had the chance to read today's lecture, then to hear it, and finally to meditate a bit about it. I hope as you all get a chance to read Dr. Hogness's magnificent paper you will agree with his primary thrust. It is a call to higher education, and particularly to higher education as it relates to the health professions, that we not be content merely to sit back and react to or complain about changes that are taking place in society about us. We must also acknowledge our responsibility as educators to be involved in developing the regulations of the professions in which we are preparing students to serve. Indeed, as educators we must be aware of changes that are coming, and play a role in helping to shape those changes. I guess if I were to pick one key word from this lecture I think it would be *initiative*, a crucial expectation of leadership, and I use leadership and administration as meaning the same thing. Dr. Hogness has asked that we recapture the initiative. I hope that this audience and a much wider audience will both read and take heed of this excellent paper.

Dr. Miller: Finally, President Hogness.

Dr. Hogness: After those words I should just keep quiet. President Corbally has summarized better than I could one of the two main things I tried to say. The other was that there is a real need for the health science schools in all institutions to work together more effectively than they have in the past. This lecture was not directed specifically to the faculty of the University of Illinois; it was directed to health science faculties throughout the country. Thank you once again for the privilege of being with you.

Dr. Miller: May I draw this forum to a close by expressing the thanks of the planning committee for the participation of the audience here in Chicago, in Rockford, in Peoria, and in Urbana; to the members of the panel for their critical and thoughtful comments; and to President Hogness for preparing and delivering a lecture which fits well with the purposes for which this lectureship was named in honor of President Emeritus David D. Henry.